

Claims

- 5 1. Flexible membrane characterized in that it comprises at least one thin layer (6) wherein a plurality of notches (2) are formed, pressing points (3) for mechanical actuating elements (9) being located between the notches, the actuating elements being designed to locally deform the membrane (1) with which they come into contact at the pressing points.
- 10 2. Membrane according to claim 1, characterized in that the notches (2) pass through the entire thickness of the membrane (1).
3. Membrane according to one of claims 1 and 2, characterized in that the notches (2) are arranged periodically in the plane of the membrane (1).
- 15 4. Membrane according to any one of the claims 1 to 3, characterized in that the notches (2) are parallel to one another.
5. Membrane according to any one of claims 1 to 4, characterized in that it
20 comprises first and second sub-assemblies of notches arranged in different directions in the plane of the membrane (1).
6. Membrane according to claim 5, characterized in that the notches (2a) of the first sub-assembly are substantially perpendicular to the notches (2b) of
25 the second sub-assembly.
7. Membrane according to any one of claims 1 to 6, characterized in that the arrangement of the notches (2) is periodic.
- 30 8. Membrane according to any one of claims 1 to 7, characterized in that the notches (2) are staggered with respect to the pressing points (3).

9. Membrane according to claim 8, characterized in that the notches (2) are arranged in the form of lines and columns each alternately comprising first notches (2a) in a first direction and second notches (2b) in a second direction.

10. Membrane according to claim 9, characterized in that the second direction is substantially orthogonal to the first direction.

11. Membrane according to one of claims 9 and 10, characterized in that the pitch (p3) separating two adjacent first notches (2a) of a line is substantially equal to twice the pitch (p1) separating two adjacent pressing points (3) in the second direction, and that the pitch (p4) separating two adjacent second notches (2b) of a column is substantially equal to twice the pitch (p2) separating two adjacent pressing points (3) in the first direction.

12. Membrane according to any one of claims 1 to 11, characterized in that the notches (2) are linear, T-shaped, H-shaped or in the form of crenelations.

13. Membrane according to claim 12, characterized in that the notches (2) comprise broadened ends of substantially circular cross-section.

14. Membrane according to any one of claims 1 to 13, characterized in that the membrane (1) constitutes a data recording medium designed to cooperate with a two-dimensional array of microtips (9) coming into contact with the membrane (1) at said pressing points (3).